ABSTRACT

A phospholipid derivative represented by the following formula (I) wherein R^1CO and R^2CO independently represent an acyl group; R^3 represents hydrogen atom, or a hydrocarbon group; symbol "a" represents an integer of 0 to 4; symbol "b" represents 0 or 1, provided that when a is 0, b is 0; X represents hydrogen atom, an alkali metal atom, an ammonium, or an organic ammonium; A^1O and A^3O represent an oxyalkylene group containing oxyethylene group, wherein the ratio of the oxyethylene group to the oxyalkylene group in A^1O and A^3O is 0.5 or larger in terms of a weight ratio; A^2O represents an oxyalkylene group; symbols "m" and "q" represent an average molar number of added oxyalkylene groups; and symbol "n" represent an average molar number of added oxyalkylene groups; provided that m, n and q satisfy the following conditions: $5 \leqq m \leqq 600$, $1 \leqq n \leqq 45$, $0 \leqq q \leqq 200$, $10 \leqq m+n+q \leqq 600$, $0.04 \leqq n/(m+n+q)$, and $q/(m+n+q) \leqq 0.8$, which can thicken the water shell of liposome surface by suppressing the spreading of the polyalkylene oxide structure on the surface and thus increase stability of the liposome.